

In re Donaldson Co. Inc. (CA FC) 29 USPQ2d 1845

In re Donaldson Co. Inc.

**U.S. Court of Appeals Federal Circuit
29 USPQ2d 1845**

**Decided February 14, 1994
No. 91-1386**

Headnotes

JUDICIAL PRACTICE AND PROCEDURE

1. Procedure -- Judicial review -- Standard of review -- Patents (§ 410.4607.09)

Obviousness of invention under 35 USC 103 is question of law, reviewed de novo on appeal; claim construction is likewise question of law if no underlying factual issues are present.

PATENTS

2. Patentability/Validity -- Construction of claims (§ 115.03)

Patent construction -- Claims -- Means (§ 125.1307)

Sixth paragraph of 35 USC 112, which states that means-plus-function claim shall be construed to cover corresponding structure, material, or acts described in specification and equivalents thereof, applies to claim interpretation arising as part of patentability determination in

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Patent and Trademark Office as well as to validity or infringement determination in court; PTO's past failure to apply sixth paragraph during prosecution does not justify continuation of such policy, nor does paragraph's failure to specifically state that it applies during prosecution give rise to ambiguity.

3. Patentability/Validity -- Construction of claims (§ 115.03)

Patent construction -- Claims -- Means (§ 125.1307)

Circumstances surrounding enactment of 35 USC 112, sixth paragraph, do not warrant finding that application of paragraph should be limited to post-issuance claim interpretation, since paragraph was enacted to statutorily overrule holding that means-plus-function language could not be employed at exact point of novelty in combination claim, and not to codify reverse doctrine of equivalents, and since fact that issue arose in context of infringement litigation does not suggest that application of paragraph six during patent prosecution was not intended.

4. Patentability/Validity -- Construction of claims (§ 115.03)

Patent construction -- Claims -- Means (§ 125.1307)

Holding that sixth paragraph of 35 USC 112 applies to claim interpretation arising as part of patentability determination in Patent and Trademark Office does not conflict with principle that claims are to be given their "broadest reasonable interpretation" during prosecution, since holding merely sets limit, determined by "corresponding structure, material, or acts described in the specification and equivalents thereof," on how broadly PTO may construe means-plus-function language under "reasonable interpretation" rubric, nor does holding conflict with second paragraph of Section 112, or principle that limitations found only in specification should not be imported or read into claim, since operation of paragraph six requires applicant employing means-plus-function language to set forth adequate disclosure in specification in order to "particularly point out and distinctly claim" invention, and involves reference to specification for purpose of determining meaning of means-plus-function clause in claim, rather than for impermissibly adding limitation.

5. Patentability/Validity -- Obviousness -- Relevant prior art -- Particular inventions (§ 115.0903.03)

Patent construction -- Claims -- Means (§ 125.1307)

Claim for industrial air-filtering device was not obvious in view of prior patent, since, in view of specification disclosure, claim language calling for "means, responsive to pressure increases in said [filtering] chamber . . . , for moving particulate matter in downward direction" must be construed to require that hopper at bottom of chamber have at least one wall constructed of flexible, diaphragm-like material which expands outward under pressure, and since prior patent, which employs collector having hopper walls which are rigid and non-responsive to pressure, does not teach or suggest claimed flexible-wall, diaphragm-like structure.

Particular patents -- Chemical -- Filter assembly

4,395,269, Schuler, compact dust filter assembly, rejection of claim 1 of reexamination application no. 90/001,776, filed May 18, 1989, reversed.

Case History and Disposition:

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Application of Donaldson Co. Inc. for reexamination of patent no. 4,395,269 (serial no. 90/001,776, filed May 18, 1989). From decision sustaining examiner's rejection of claim 1 in application on ground of obviousness under 35 USC 103, applicant appeals. Reversed.

Attorneys:

R. Carl Moy, of Merchant, Gould, Smith, Edell, Welter & Schmidt, Minneapolis, Minn., for appellant.

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Columbia.

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Judge:

Before Nies, chief judge, and Rich, Newman, Archer, Mayer, Michel, Plager, Lourie, Clevenger, Rader, and Schall, circuit judges.

Opinion Text

Opinion By:

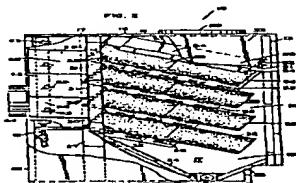
Rich, J.

The Donaldson Company (Donaldson) appeals from the January 30, 1991 decision of the Board of Patent Appeals and Interferences (Board) of the United States Patent and Trademark Office (PTO), reaffirmed on reconsideration on April 17, 1991, sustaining the Examiner's rejection of claim 1 of reexamination application Serial No. 90/001,7761 (Schuler application) under 35 U.S.C. Section 103. We reverse.

I. BACKGROUND

A. The Invention

The present invention relates to industrial air-filtering devices often referred to as "dust collectors." Fig. 2 of the Schuler application is reproduced below.



In operation, dust-laden air enters dirty-air chamber (22) through air inlet (20) at the top, passes through filters (32), and then exits through clean-air outlet (64) at the left. During this process, dust is collected on the outside of the filters. To periodically dislodge accumulated dust from the filters, the Schuler collector includes valve and nozzle assemblies (65), which direct jets of compressed air into the hollow interior of each filter. In doing so, the normal direction of air flow is reversed, thus dislodging a substantial portion of the dust accumulated on the outside of each filter. The dislodged dust then falls through the dirty-air chamber and accumulates at the bottom of the chamber in hopper (25), where it is removed by auger screw (68).

One problem with conventional collectors is that the dust accumulated in the hopper tends to harden or cake, thus interfering with the free movement of the accumulated dust downward to the auger screw. To overcome this problem, the Schuler collector takes advantage

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of the fact that every pulse of air from the nozzles causes the pressure within the dirty-air chamber to increase momentarily. At least one wall of the hopper of the Schuler collector (24) is made from a flexible material which in essence transforms the hopper into a diaphragm-like structure which expands outward in response to the temporary pressure increases. This movement breaks up any dust that may have hardened or caked onto the hopper. This flexible-wall, diaphragm-like structure also provides the additional advantages of deadening the sounds of the cleaning pulses and expanding the volume of the dirty-air chamber, thus allowing the air pulses to act more vigorously on the filters.

Claim 1, the only claim on appeal, reads, with insertion of reference numerals in brackets, as follows:

An air filter assembly [10] for filtering air laden with particulate matter, said assembly [10] comprising:

a housing having a clean air chamber [60] and a filtering chamber [22], said housing having an upper wall [16], a closed bottom [26], and a plurality of side walls [17, 62] depending from said upper wall [16];

a clean air outlet [64] from said clean air chamber [60] in one of said side walls [62];

a dirty air inlet [20] to said filtering chamber [22] positioned in a wall [16] of said housing in a location generally above said clean air outlet [64];

means [28] separating said clean air chamber [60] from said filtering chamber [22] including means mounting a plurality of spaced-apart filter elements [32] within said filtering chamber [22], with each of said elements [32] being in fluid communication with said air outlet [64];

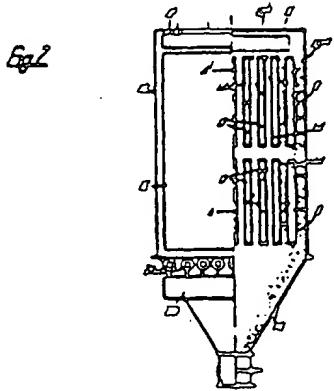
pulse-jet cleaning means [65], intermediate said outlet [64] and said filter elements [32], for cleaning each of said filter elements [32]; and

a lowermost portion [25] in said filtering chamber [22] arranged and constructed for the collection of particulate matter, said portion [25] having *means [24], responsive to pressure increases in said chamber [22] caused by said cleaning means [65], for moving particulate matter in a downward direction* to a bottommost point [65] in said portion [25] for subsequent transfer to a location exterior to said assembly [10]. [Emphasis ours.]

B. The Board Decision

In its initial January 30, 1991 decision, the Board relied solely upon the dust collector disclosed in U.S. Patent No. 3,421,295 (Swift patent) to affirm the Examiner's rejection of claim

1. The Board did not find the secondary references relied upon by the Examiner2 necessary to sustain the rejection. Swift's dust collector, illustrated below by Fig. 2 of the Swift patent, uses pulses of compressed, high-energy gas to counteract normal filter flow. These pulses of compressed gas dislodge particulate matter from spaced-apart filter elements (14), and the dislodged particulate matter moves towards the bottom of the hopper (16).



At page 5 of its initial decision, the Board noted Donaldson's arguments that Swift fails to disclose the use in its dust collector of a flexible surface which flexes in response to the gas pulses therein, but stated that:

while such a flexible sloping surface is a recited feature of the apparatus of claims 2, 3, and 5, this is *not* the case as to the apparatus of claim 1. Thus, [Donaldson's] argument is of no moment to claim 1. Moreover, we are convinced that hopper 16 of the gas filtering apparatus of Swift is "responsive" to pressure increases in the apparatus caused by the jet-cleaning means whereby filtered particulate matter is caused to move in a downward direction. Thus, we agree with the examiner that there is no apparent distinction between the "lowermost portion" of the apparatus recited in claim 1 and the corresponding portion of the apparatus of Swift.

Thus, the Board did not interpret the "means, responsive to pressure increases in said chamber caused by said cleaning means, for moving particulate matter in a downward direction" language recited in the last paragraph of claim 1 as limited to the flexible

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wall, diaphragm-like structure disclosed in Schuler's specification, and equivalents thereof. Indeed, the Board specifically stated at page 2 of its decision on reconsideration mailed April 17, 1991:

It is axiomatic that particular features or limitations appearing in the specification are *not* to be read into the claims of an application. [citations omitted] Thus, contrary to [Donaldson's] argument, a flexible sloping surface is *not* a feature of the air filtering apparatus of claim 1 which distinguishes it over the air filtering apparatus of Swift.

C. *Donaldson's Assertions* For purposes of this appeal, Donaldson effectively concedes that

Swift teaches or suggests each and every element of the apparatus recited in Schuler's claim 1 except for the "means, responsive to pressure increases in said chamber caused by said cleaning means, for moving particulate matter in a downward direction" recited in the last segment of claim 1. As to this limitation, Donaldson argues that the Board erred in holding that Swift teaches or suggests such a means as it is described in Schuler's specification. Donaldson further argues that the Board's error in this regard is the result of a fundamental legal error by the Board, namely the Board's failure to obey the statutory mandate of 35 U.S.C. Section 112, paragraph six, in construing this claim.

II. DISCUSSION

A. Standard of Review

[1] Obviousness under section 103 is a question of law that this court reviews de novo. *In re Woodruff*, 919 F.2d 1575, 1577, 16 USPQ2d 1934, 1935 (Fed. Cir. 1990). Similarly, our precedent is that claim construction, when, as here, there are no underlying factual issues, is also a question of law that we review de novo. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed. Cir.), cert. denied, 465 U.S. 1026 [224 USPQ 520] (1984). In this case, the PTO erred in its construction of the "means-plus-function" language recited in the last segment of Schuler's claim 1, and this error consequently led the PTO to impose an improper obviousness rejection.

B. 35 U.S.C. Section 112, Paragraph Six When statutory interpretation is at issue, the plain and unambiguous meaning of a statute prevails in the absence of clearly expressed legislative intent to the contrary. See *Mansell v. Mansell*, 490 U.S. 581, 592, (1989); *Hoechst Aktiengesellschaft v. Quigg*, 917 F.2d 522, 526, 16 USPQ2d 1549, 1552 (Fed. Cir. (1990). The statutory language at issue in this case reads:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. [Emphasis ours.]

35 U.S.C. Section 112, paragraph 6 (1988).

[2] The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure. Paragraph six does not state or even suggest that the PTO is exempt from this mandate, and there is no legislative history indicating that Congress intended that the PTO should be. Thus, this court must accept the plain

and precise language of paragraph six. *See Mansell supra*; *see also Diamond v. Chakrabarty*, 447 U.S. 303, 308 [206 USPQ 193] (1980) ("courts 'should not read into the patent laws limitations and conditions which the legislature has not expressed' "), quoting *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 199 [17 USPQ 154] (1933). Accordingly, because no distinction is made in paragraph six between prosecution in the PTO and enforcement in the courts, or between validity and infringement, we hold that paragraph six applies regardless of the context in which the interpretation of means-plus-function language arises, i.e., whether as part of a patentability determination in the PTO or as part of a validity or infringement determination in a court.⁴ To the extent that *In re Lundberg*, 244 F.2d 543, 113 USPQ 530 (CCPA 1979), *In re Arbeit*, 206 F.2d 947, 99 USPQ 123 (CCPA 1953), or any other precedent of this court suggests or holds to the contrary, it is expressly overruled.

The Commissioner argues that his interpretation is entitled to deference in view of what the Commissioner alleges is the PTO's sweeping and long-standing practice of not applying paragraph six during examination. We disagree. The fact that the PTO may have failed to adhere to a statutory mandate over an extended period of time does not justify its continuing to do so. In addition, paragraph six facially covers every situation involving the interpretation of means-plus-function language, and the Commissioner's attempts to create an ambiguity in paragraph six where none exists are to no avail. The fact that paragraph six does not specifically state that it applies during prosecution in the PTO does not mean that paragraph six is ambiguous in this respect. Quite the contrary, we interpret the fact that paragraph six fails to distinguish between prosecution in the PTO and enforcement in the courts as indicating that Congress did not intend to create any such distinction.

In addition, section 112 as a whole relates to requirements for the specification and claims without regard to whether a patent or patent application is involved. Moreover, section 112 is found in Chapter 11 of Title 35, titled "Application for Patent," which supports our holding that section 112, paragraph six, governs the interpretation of "means" clauses in a claim for a combination when being examined in pending applications.

[3] The Commissioner argues that Congress enacted paragraph six to codify the "reverse doctrine of equivalents" for means-plus-function claim language, a claim interpretation tool which finds application only in the litigation context, wherefore Congress must have intended paragraph six to apply only in the context of post-issuance infringement and validity actions. We see no merit in this imaginative reasoning, and no support for it has been cited. The record is clear on why paragraph six was enacted. In *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 [71 USPQ 175] (1946), the Supreme Court held that means-plus-function language could not be employed at the exact point of novelty in a combination claim. Congress enacted paragraph six, originally paragraph three, to statutorily overrule that holding. *See In re Fuetterer*, 319 F.2d 259, 264 n.11, 138 USPQ 217, 222 n.11 (CCPA 1963) (noting that it was Congress's intent to restore the law regarding broad functional language in combination claims to its state prior to *Halliburton*). The fact that the question of how to treat means-plus-function language came to Congress's attention through the context of infringement litigation does not suggest that Congress did not intend paragraph six to apply to all interpretations of means-plus-function claim

language. Furthermore, there is no legislative history suggesting that Congress's purpose in enacting paragraph six was to codify the reverse doctrine of equivalents,⁵ and thus there is no

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reason to believe that Congress intended to limit the application of paragraph six to post-issuance claim interpretation.

[4] Contrary to suggestions by the Commissioner, our holding does not conflict with the principle that claims are to be given their "broadest reasonable interpretation" during prosecution. See, e.g., *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).⁶ Generally speaking, this claim interpretation principle remains intact. Rather, our holding in this case merely sets a limit on how broadly the PTO may construe means-plus-function language under the rubric of "reasonable interpretation." Per our holding, the "broadest reasonable interpretation" that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.

Our holding similarly does not conflict with the second paragraph of section 112.⁷ Indeed, we agree with the general principle espoused in *In re Lundberg*, 244 F.2d at 547-48, 113 USPQ at 534 (CCPA 1979), that the sixth paragraph of section 112 does not exempt an applicant from the requirements of the first two paragraphs of that section. Although paragraph six statutorily provides that one may use means-plus-function language in a claim, one is still subject to the requirement that a claim "particularly point out and distinctly claim" the invention. Therefore, if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

Also contrary to suggestions by the Commissioner, our holding does not conflict with the general claim construction principle that limitations found only in the specification of a patent or patent application should not be imported or read into a claim. See *In re Priest*, 582 F.2d 33, 37, 199 USPQ 11, 15 (CCPA 1978). The Commissioner confuses impermissibly imputing limitations from the specification into a claim with properly referring to the specification to determine the meaning of a particular word or phrase recited in a claim. See *E.I. Du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433, 7 USPQ2d 1129, 1131 (Fed. Cir. 1988) (discusses importance of distinguishing between the two). What we are dealing with in this case is the construction of a limitation already in the claim in the form of a means-plus-function clause and a statutory mandate on how that clause must be construed.

C. *Application of Paragraph Six to Claims* For the foregoing reasons, the PTO was required by statute to look to Schuler's specification and construe the "means" language recited in the last segment of claim 1 as limited to the corresponding structure disclosed in the specification and equivalents thereof.⁸ The particular means language of claim 1 at issue reads:

means, responsive to pressure increases in said chamber caused by said cleaning means, for moving particulate matter in a downward direction to a bottommost point in said [lowermost] portion for subsequent transfer to a location exterior to said assembly.

In the "Summary of the Invention" section of his specification, Schuler states:

A lowermost portion of the assembly is arranged and constructed to collect the removed particulate matter. The collection *portion* includes a sloping surface constructed of a material which flexes in response to the pressure differentials created within the *chamber* during the operation of the pulse-jet cleaning means.

. . . . [t]he sloping *surface* of the collection portion of the assembly moves outward, or flexes, as the pressure increases within

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the chamber with each operation of the pulse-jet means. The flexing movement allows the air entraining the dust from the filter element to travel towards the collection area, thereby helping to prevent the removed dust from being re-deposited on a neighboring filter element. Also, the flexing surface dampens the noise and vibrations of the pulse jet cleaning means, and moves the dust collected on its surface towards the collection area for subsequent removal from the assembly itself. [Emphasis ours.]

Schuler Patent, Col. 2, lines 6-12, 28-39. In discussing a preferred embodiment of his dust collector, Schuler further describes the "means, responsive to pressure" recited in claim 1 as follows:

The larger surface area 24 is designed and arranged to act as a diaphragm which is movably responsive to the pressure differentials created within the dirty air chamber 22 by the operation of the pulse jet cleaning means 65, 66. The diaphragm 24 is preferably made from a flexible, reinforced rubber sheet material. However, any material sufficiently strong and flexible could be used, i.e., a relatively thin metal panel which will flex. The diaphragm movement caused by the operation of the pulse jet cleaning means will be explained in detail below.

Schuler Patent, Col. 6, lines 21-31. The further explanation referred to reads:

During the operation of the pulse-jet cleaning means the larger, sloping surface or diaphragm 24 moves outward or away from the filter elements 32 in response to the increase in pressure within the dirty air chamber 22. This outward flexing is shown in broken lines in FIG. 2. As the pressure diminishes, the surface 24 flexes back to its normal position.

The pressure-responsive, flexing movement of the larger sloping surface 24 accomplishes four important functions: (1) the movement allows air entraining the removed dust to move downwardly towards the hopper; (2) it helps prevent the removed dust and particular matter from being re-deposited onto adjacent elements; (3) it helps to dampen the noise and the

vibrations of the pulse-jet cleaning means; and (4) it helps to move the particulate matter which has settled on the diaphragm surface towards the auger screw. As the particulate matter accumulates in the lowermost portion 25 upon the auger screw 68, it is removed, by the operation of the auger screw 68, to a location exterior to the filter assembly. There is nearly zero dirty air velocity at the point adjacent to the auger screw, as a result of the dirty air inlet not being in nor even adjacent to the particulate matter collection area of the filter assembly.

Schuler Patent, Col. 7, lines 42-66.

[5] A review of the foregoing excerpts leads to the inescapable conclusion that Schuler's specification defines the "means, responsive to pressure increases in said chamber . . . , for moving particulate matter in a downward direction" language recited in claim 1 as a flexible-wall, diaphragm-like structure, such that the hopper is made up of at least one flexible wall which expands outward upon pressure increases, thus causing caked-on dust to break loose from the wall of the hopper and fall towards the auger screw due to gravity.

D. *Swift*

The Swift collector does not teach or suggest the flexible-wall, diaphragm-like structure claimed by Schuler. Indeed, there is no teaching or suggestion in Swift that the hopper walls therein be anything but rigid and non-responsive to any pressure increases within the collector. Consequently, it would not have been obvious to one of ordinary skill in the art to modify Swift to obtain Schuler's flexible-wall, diaphragm-like structure. In this regard, we note that the Board itself specifically held at page 6 of its initial decision that the examiner had failed to establish a *prima facie* case of obviousness as to claims 2, 3, and 5, because Swift and the other references relied upon by the examiner

fail to disclose or render obvious the feature of the lowermost portion of the claimed apparatus comprising the flexible sloping surface which flexes in response to increases in pressure in the apparatus caused by the pulse-jet cleaning means whereby filtered particulate matter is moved in a downward direction.

Notwithstanding this explicit holding by the Board that Swift fails to teach or suggest the flexible-wall, diaphragm-like structure that Schuler *discloses* in his specification *as corresponding to the "means" language recited in the last segment of claim 1*, the Commissioner nevertheless argues that the examiner found, and the Board allegedly implicitly agreed, that Swift's hopper walls *respond* to jet-cleaning pressure increases by vibrating, and that Donaldson has failed to establish that this allegedly responsive structure is not an "equivalent" to Schuler's disclosed flexible-wall, diaphragm-like structure. The Commissioner further contends that the slanted hopper walls in Swift's collector satisfy the "means, responsive to pressure" language of claim 1.

The Commissioner's arguments appear to address concepts of anticipation under 35 U.S.C. Section 102. However, neither the Examiner nor the Board imposed an anticipation rejection under section 102. The only rejection before this court is one of obviousness under section 103.

Nevertheless, as explained previously, section 112, paragraph six, requires us and the PTO to construe the "means, responsive to pressure" language recited in claim 1 as limited to a flexible-wall, diaphragm-like structure as disclosed in Schuler's specification, or an "equivalent" thereof. In this regard, the Commissioner has failed to establish the existence in conventional hopper structures like Swift's of any inherent vibrations resulting from pulse-jet cleaning sufficient to loosen hardened dust that gathers on hopper walls.⁹ Thus, because the Commissioner's unsupported assertion that Swift's hopper walls would vibrate in response to pressure increases caused by pulse-jet cleaning is mere speculation unsupported by any rational basis for believing it might be true, the burden clearly did not shift to Schuler to establish non-equivalence. Furthermore, the Commissioner has failed to persuade us that such vibration, even if it did occur, should be viewed as making Swift's hopper structure an "equivalent" of Schuler's flexible-wall, diaphragm-like structure.

As to the Commissioner's arguments regarding Swift's slanted hopper walls, we note that neither the examiner nor the Board ever asserted that these slanted walls by themselves represent an "equivalent" of Schuler's flexible-wall, diaphragm-like structure. In addition, the Commissioner has failed to set forth any reasonable explanation as to how Swift's walls are "responsive to pressure increases."

In summary, Schuler's claimed collector would not have been obvious in view of Swift's collector having hopper walls which are rigid and non-responsive to pressure increases within the collector. In addition, even if the issue of anticipation under section 102 were before us, which it is not, the Commissioner could not have argued anticipation because he has failed to establish that the rigid hopper wall structure in Swift's collector is an "equivalent" of the flexible wall, diaphragm-like hopper structure in Schuler's claim 1 collector.

CONCLUSION

For the foregoing reasons, we hold, as a matter of law, that Swift does not render the structure defined by claim 1 obvious under 35 U.S.C. Section 103, and therefore we reverse the decision of the Board. On the record before us, we see no reason to remand this case for further findings as to "equivalents" as suggested by the Commissioner. *REVERSED*

Footnotes

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Footnote 1. Reexamination application Serial No. 90/001,776, filed on May 18, 1989, is for a reexamination of U.S. Patent No. 4,395,269 (Schuler Patent), assigned to Donaldson.

Footnote 2. The other references were U.S. Patent No. 4,409,009 issued to Lissy (Lissy patent) and U.S. Patent No. 2,732,099 issued to Davis (Davis patent).

Footnote 3. There is no evidence that, at the time of the Act of July 24, 1965, Pub. L. No. 89-83, Section 9, 1965 U.S.C.C.A.N. (79 Stat.) 259, or the Act of Nov. 14, 1975, Pub. L. No. 94-131, Section 7, 1975 U.S.C.C.A.N. (89 Stat.) 685, which reenacted the third paragraph of section 112, now the sixth paragraph, Congress was specifically aware of the PTO's allegedly sweeping practice of interpreting means-plus-function language as reading on each and every means of performing that function, or of any CCPA decision condoning such a practice, and we do not find this reenactment without awareness to indicate clear Congressional approval or disapproval. See *AFL-CIO v. Brock*, 835 F.2d 912, 916 n.6 (D.C. Cir. 1987) (stating that no case has rested merely on presumptive knowledge, noting that, in *Lindahl v. OPM*, 450 U.S. 768, 782-86 (1984), relied upon by the Commissioner here, there was evidence in the legislative history that Congress was aware of the particular interpretation at issue), *citing with approval*, C. Sands, SUTHERLAND ON STATUTORY CONSTRUCTION, Section 49.09 (4th ed. 1984) (rule of implied adoption of agency interpretation does not apply where nothing indicates that the legislature had its attention directed to such interpretation upon reenactment.); see also *General American Transp. v. Interstate Commerce Comm.*, 872 F.2d 1048, 1053 (D.C. Cir. 1989). In addition, P.J. Federico's post-ACT "Commentary on the New Patent Act," 35 U.S.C.A. Section 1 (1954 ed., West), reprinted in 75 JPOS 162 (1993), is not legislative history per se that may be relied upon to indicate Congressional intent. Even if it were, the comments contained therein do not suggest that Federico knew of any particular intent by Congress regarding the manner in which the sixth paragraph, then the third paragraph, should be applied. In this particular, he was merely stating his personal views.

Footnote 4. *Accord, Arrhythmia Research Technology v. Corazonix Corp.*, 958 F.2d 1053, 1060, 22 USPQ2d 1033, 1038 (Fed. Cir. 1992) (infringement determination); *In re Bond*, 910 F.2d 831, 833, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990) (patentability over prior art determination); *In re Iwahashi*, 888 F.2d 1370, 1375, 12 USPQ2d 1908, 1912 (Fed. Cir. 1989); *Johnston v. Ivac Corp.*, 885 F.2d 1574, 1580, 12 USPQ2d 1382, 1386 (Fed. Cir. 1989) (infringement determination); *In re Meyer*, 688 F.2d 789, 796, 215 USPQ 193, 199 (CCPA 1982) (section 101 patentability determination); *In re Knowlton*, 481 F.2d 1357, 1366, 178 USPQ 486, 492-93 (CCPA 1973) (patentability determination as to section 112 and prior art); *In re Foster*, 438 F.2d 1011, 1016, 169 USPQ 99, 102 (CCPA 1971) (section 101 patentability determination); *In re Bernhart*, 417 F.2d 1395, 1399, 163 USPQ 611, 615 (CCPA 1969) (section 101 patentability determination); *In re Prater*, 415 F.2d 1393, 1406, 162 USPQ 541, 551-52 (CCPA 1969) (section 103 patentability determination). See also generally R. Carl Moy, *The Interpretation of Means Expressions During Prosecution*, 68 JPOS 246 (1986).

Footnote 5. Of course, this is not to say that this may not have been one of the results of enacting this paragraph. In *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580, 12 USPQ2d 1382, 1386-87 (Fed. Cir. 1989), this court noted that paragraph six effectively restricts the scope that

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one would attribute to means-plus-function language if one were to read it in a vacuum without reference to the specification.

Footnote 6. Of interest, the *Prater* court distinguished the apparatus claim therein from the process claims at issue on the basis that the apparatus claim employed "typical means-plus-function language as expressly permitted by the third paragraph [now sixth] of 35 U.S.C. Section 112." *In re Prater*, 415 F.2d at 1406, 162 USPQ at 551-52.

Footnote 7. The second paragraph of 35 U.S.C. Section 112 reads:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Footnote 8. The word "equivalent" in 35 U.S.C. Section 112, paragraph 6, should not be confused with the doctrine of equivalents. *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575, 225 USPQ 236, 239 (Fed. Cir. 1985); *see also Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 933-34, 4 USPQ2d 1737, 1741 (Fed. Cir.) (en banc), *cert. denied*, 485 U.S. 961 (1988).

Footnote 9. We note that the Lissy patent discloses a dust collector in which the hopper walls thereof are actuated mechanically by vibrators to loosen caked-on dust so that it can fall to the bottom of the hopper. *Lissy Patent*, Col. 2, lines 4-8; Col. 4, lines 20-27. If conventional pulse-jet cleaning provided sufficient vibrations to loosen caked-on dust, Lissy presumably would not have found it necessary to add vibrators. Similarly, Davis presumably would not have found it necessary to use the inflatable membrane described therein. *Davis Patent*, Col. 4, lines 23-58.

- End of Case -

D.M.I., Inc. v. Deere & Co., 225 USPQ 236 (CA FC 1985)

D.M.I., Inc. v. Deere & Co.

**(CA FC)
225 USPQ 236**

Decided Mar. 4, 1985

No. 84-1475

U.S. Court of Appeals Federal Circuit

Headnotes

PATENTS

1. Claims -- "Means" claims (§ 22.60)

Although patentees are required to disclose in specification some enabling means for accomplishing function set forth in "means plus function" limitation, there is, and can be, no requirement that applicant describe and predict every possible means of accomplishing function, 35 USC 112-6 having been written to avoid holding that means-plus-function must be read as covering only means described in specification.

2. Claims -- "Means" claims (§ 22.60)

Word "equivalent" in 35 USC 112 should not be confused with "doctrine of equivalents," sole question in application of "means plus function" paragraph of Section 112 being whether single means in accused device which performs function stated in claims is same or equivalent to corresponding structure described in patentee's specification as performing that function.

Particular patents -- Plows

3,817,333, Kinzenbaw, Plow System With Plurality of Plow Units and Means for Adjusting Spacing Between Units in a Continuous Manner, holding of noninfringement reversed.

Case History and Disposition:

Appeal from District Court for the Central District of Illinois.

Action by D.M.I., Inc., against Deere & Company, for patent infringement. From judgment for defendant, plaintiff appeals. Reversed and remanded.

Attorneys:

James J. Hill, Chicago, Ill., for appellant.

Robert H. Fraser, and Fraser & Bogucki, both of Los Angeles, Calif. (Virgil Bozeman, John V. Patton, Bozeman, Neighbor, Patton & Noe, H.V. Harsha,

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and D.L. Hollister, all of Moline, Ill., on the brief) for appellee.

Judge:

Before Markey, Chief Judge, Nichols, Senior Circuit Judge, and Bissell, Circuit Judge.

Opinion Text

Opinion By:

Markey, Chief Judge.

D.M.I., Inc. (DMI) appeals from a grant of summary judgment of noninfringement by the United States District Court for the Central District of Illinois. We reverse and remand.

Background

DMI sued Deere & Company (Deere) for infringement of U.S. Patent 3,817,333 ('333 patent). The patent discloses and claims a plow system with means for adjusting the spacing of plow units while the plow is moving. Claims 1 and 8 are the only independent claims of the '333 patent.

Claim 1 contains this limitation:

said steering means including compensating means for maintaining said steering wheel parallel to said plow units under normal operation for all settings of the spacing between said plow units, whereby the tail end of said plow system is caused to track the movement of said tractor during turning and said steering wheel is steered in the direction of travel of said vehicle to cause said tail section to align with the direction of travel of said vehicle for

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all lateral settings of said plow units.

Claim 8 contains this limitation:

steering means * * * including compensation means for correcting the disposition of said trailing wheel for proper alignment with said rear ground-working implement to follow therebehind for all lateral adjustments of said units.

The specification of the '333 patent contains these references to "compensating means":

I refer to this parallelogram arrangement as a compensating means in the steering mechanism.

As the tail section is moved to the desired setting, the compensation means mentioned automatically straightens out the tail wheel which thereafter follows in the furrow of the rearmost plant unit.

Deere moved for an order that its accused plow "does not infringe claims 1-9" of the '333 patent.

The district court granted Deere's motion, saying:

Although the claim does not define the "compensating means," such definition is not lacking in the patent as a whole. Thus, in his description of the parallelogram structure in the specification, the patentee defined "compensating means" in the language previously noted, "I refer to this parallelogram arrangement as a compensating means in the steering mechanism." In its argument before this court, DMI says, " * * * the compensation * * * of the rear wheel is caused by the mechanical steerage linkage in the 333 patent such that as the plow rotates to the adjusted position, the steering linkage causes the wheel to rotate on its spindle and steer correctly at the adjusted position." Yet, DMI argues that no estoppel can arise which may restrict the broad language of the claim to a limitation which is not specifically stated therein, and that it is entitled to show infringement by an equivalent structure which achieves the same result. Deere responds to that argument by its assertion that DMI is claiming an impermissible extension of equivalence to include any mechanism which is capable of steering the rear wheel. That characterization of DMI's position appears to the court to be accurate.

It is recognized that a claim must be construed upon the language employed and that as a general rule a limitation cannot be read into a patent claim to avoid infringement. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 770, 218 USPQ 81 (Fed. Cir. 1983). Yet the Court cannot ignore the fact that the specification does contain the patentee's own definition of the term "compensating means" which is recited, without definition, in the claim itself. The situation presented here is closely analogous to that in *Hale Fire Pump Co. v. Tokai, Ltd.*, 205 USPQ 123 (CCPA 1980). Hale considered the question whether a claim of a "releasable means" (in a patent in which the only specification reference which corresponded to that language described the release means as a reversible jackscrew) was

infringed by a structure which lacked that reversible screw. The release feature in the accused structure involved a pair of handles and a locking knob to achieve that result. The court held that the jackscrew assembly must be construed as defining, and limiting, the claim reference to a "releasing means," and that the handles-knob assembly of the accused structure was not an equivalent structure. (At p. 127) DMI cannot avoid its own patentee's definition of a "compensation means" and claim equivalence in every structure which achieves the same result by a method and structure which do not even come close to falling

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within that definition. A comparison of the claim, as thus interpreted, to the 2800 plow structure must lead to the conclusion that the 2800 structure does not infringe the independent claims of the -333 patent.

Issue

Whether the district court erred in granting summary judgment of noninfringement.¹

Opinion

As the district court recognized, "[s]ummary judgment is as appropriate in a patent case as in any other" when it is shown that no genuine issue of material fact remains for decision and that the movant is entitled to judgment as a matter of law. *Barmag Barmer Maschinenfabrik A.G. v. Murata Mach., Ltd.*, 731 F.2d 831, 835, 221 USPQ 561, 564 (Fed. Cir. 1984); *Union Carbide Corp. v. American Can Co.*, 724 F.2d 1567, 220 USPQ 584 (Fed. Cir. 1984). It is at least conceivable that comparison of a properly interpreted claim with a stipulated or uncontested description of an accused device or process would reflect such an absence of material fact issue as to warrant summary judgment of infringement or noninfringement. Because infringement is itself a fact issue, however, a motion for summary judgment of infringement or noninfringement should be approached with a care proportioned to the likelihood of its being inappropriate.

In the present case, the district court erred: (1) as a matter of law in interpreting the claims; and (2) failing to note the presence of material fact issues.

(1) Claim Interpretation

The district court said claim 1, "as thus interpreted," was not infringed by the accused Deere structure. As this court stated in *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 956, 220 USPQ 592, 596 (Fed. Cir. 1983), "Claim interpretation is a legal matter subject to review free of the clearly erroneous standard applicable to fact findings."

The interpretation adopted here by the district court is in law twice flawed. It was adopted in contravention of the statute, 35 U.S.C. §112, and it involved a reading into independent claim 1 of a limitation appearing in dependent claim 4.

Paragraph 6 of 35 U.S.C. §112 reads:

[An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim *shall be construed* to cover the corresponding structure, material, or acts described in the specification *and equivalents thereof*. [Emphasis added.]

[1] The first flaw occurred here when the district court apparently lost sight of the *function* appearing in the involved claims. That function is clearly expressed in the language "for maintaining said steering wheel * * * lateral settings of said plow units" (claim 1) and "for correcting the disposition * * * for all lateral adjustments of said units" (claim 8). Its attention having been focused on a felt, but non-existent, need to find a "definition" of "compensating means" per se in the *claim* and on an unfounded fear that a "result" rather than a function might be covered, the court looked to the specification. No basis was cited by the district court, and none appears in the record, for limiting the means plus function limitation of the independent claims to compensating means formed of a parallelogram. See Schenck v. Nortron Corp., 713 F.2d 782, 787, 218 USPQ 698, 702 (Fed. Cir. 1983)² To interpret "means plus function" limitations as limited to a particular means set forth in the specification would be nullify the provision of §112 requiring that the limitation *shall be construed* to cover the structure described in the specification *and equivalents thereof*. Patentees are required to disclose in the specification some enabling means for accomplishing the function set forth in the "means plus function" limitation. At the same time, there is and can be no requirement that applicants describe or predict every possible means of accomplishing that function. The statute, §112-6, was written precisely to avoid a holding that a means-plus-function limitation must be read as covering only the means disclosed in the specification.

The second legal flaw in the district court's interpretation of the claim in this case stemmed from an apparent non-awareness of

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the presence of this limitation in dependent claim 4:

wherein said compensation means of said steering means is characterized in that a parallelogram is formed by the axes of the pivotal connections between said tie rod and said first and second arms, the pivotal axis of said first arm relative to said plow system, and the pivotal axis of said second arm on said inclined beam.³

The district court said "as a general rule a limitation cannot be read into a claim to avoid infringement," citing Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), cert. denied, 104 S.Ct. 1284, 224 USPQ 520 (1984). Where, as here, the limitation sought to be "read into" a claim already appears in another claim, the rule is far more than "general." It is fixed. It is long and well established. It enjoys an immutable and universally applicable status comparatively rare among rules of law. Without it, the entire statutory and regulatory structure governing the drafting, submission, examination, allowance, and

enforceability of claims would crumble. This court has confirmed the continuing life of the rule. Amstar Corp. v. Envirotech Corp., 730 F.2d 1476, 221 USPQ 649 (Fed. Cir. 1984); Raytheon Co. v. Roper Corp., *supra*; Fromson v. Advance Offset Plate, Inc., 720 F.2d 1565, 219 USPQ 1137 (Fed. Cir. 1983). Indeed, in Kalman, 713 F.2d at 770, 218 USPQ at 787-88, this court quoted with approval this clear statement of the rule found in Deere & Co. v. Int'l Harvester Co., 658 F.2d 1137, 1141, 211 USPQ 11, 16 (7th Cir.), cert. denied, 454 U.S. 969 (1981):

Where some claims are broad and others narrow, the narrow claim limitations cannot be read into the broad whether to avoid invalidity or to escape infringement.

The district court's reliance on Hale Fire Pump Co. v. Tokai, Ltd., 614 F.2d 1278, 205 USPQ 123 (CCPA 1980), was misplaced. In that case, the prosecution history established that the claim was allowed because the disclosed jackscrew embodiment of "releasable means" had a mechanical advantage in disassembling a pump, an advantage absent in a two-part pump. Nothing of record here indicates that claims 1 and 8 were allowed because the disclosed embodiment of the claimed compensation means was a parallelogram. On the contrary, the specification was here amended solely to provide an antecedent basis for the "means for compensating" limitation in the claims.

(2) Fact Issues

Whether Deere's hydraulically operated plow system includes a compensating means that is an equivalent of DMI's parallelogram and that performs the function of that means as set forth in claims 1 and 8 is a question of fact. In terms of the statute, §112, an affirmative answer to that question would mean that Deere's hydraulic means would be an "equivalent" of DMI's parallelogram or some part thereof. If (as appears uncontested) Deere's plow system includes all the other limitations of those claims, it would also mean that they are literally infringed, for in that event the entirety of claims 1 and 8 would "read" directly on Deere's plow system.

[2] Thus the word "equivalent" in §112 should not be confused, as it apparently was here, with the "doctrine of equivalents." In applying the doctrine of equivalents, the fact finder must determine the range of equivalents to which the claimed invention is entitled, in light of the prosecution history, the pioneer-non-pioneer status of the invention, and the prior art. It must then be determined whether the entirety of the accused device or process is so "substantially the same thing, used in substantially the same way, to achieve substantially the same result" as to fall within that range. Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 610, 85 USPQ 328, 330 (1950). In applying the "means plus function" paragraph of §112, however, the sole question is whether the single means in the accused device which performs the function stated in the claim is the same as or an equivalent of the corresponding structure described in the patentee's specification as performing that function.

DMI at one point indicates that it intends to rely on the doctrine of equivalents to support its assertion that claims other than claims 1 and 8 are infringed. Whether such other claims are infringed under the doctrine of equivalents is also a question of fact.⁴

DMI's reliance on the doctrine of equivalents in respect of other claims may account for the

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district court's concern that DMI was "claiming an impermissible extension of equivalence to include any mechanism which is capable of steering the rear wheel," and was trying to avoid "its own patentee's definition of a 'compensating means' and claim

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equivalence in every structure which achieves the same result." That concern, as the district court noted, was fostered by Deere's arguments. It is unfounded.

Accordingly, the entry of summary judgment is reversed and the case is remanded for further proceedings.

Reversed and Remanded.

Footnotes

Footnote 1. DMI asks us to save "further expense and delay by holding that claim 1 of the patent is infringed." We decline the invitation to serve a role outside our charter, namely that of the fact finder.

Footnote 2. Claims are always interpretable in light of the specification and prosecution history of the application that led to the patent. In the present case, however, there is simply no basis in either the specification or prosecution history for limiting the "means plus function" clause in claim 1 to the employment of a parallelogram.

Footnote 3. DMI did not charge infringement of claims 3, 4, and 9, in which limitations to a parallelogram appear.

Footnote 4. Deere says DMI, in answer to an interrogatory, waived all applicability of the doctrine of equivalents, but that DMI supplemented that answer after Deere filed its motion. It is unclear whether DMI is asserting that claims 1 and 8 are infringed both literally and under the doctrine of equivalents.

- End of Case -

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In re Mulder and Wulms, 219 USPQ 189 (CA FC 1983)

In re Mulder and Wulms

**(CA FC)
219 USPQ 189**

Decided Aug. 23, 1983

No. 83-647

U.S. Court of Appeals Federal Circuit

Headnotes

PATENTS

1. Affidavits -- Anticipation references (Rule 131) (§ 12.3)

Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

Patent Rule 131(b) says that applicants who have shown no actual reduction to practice of invention in this country and no constructive reduction prior to date of reference have to show conception in this country prior to reference's date coupled with due diligence from that date to application's filing.

2. Affidavits -- Anticipating references (Rule 131) (§ 12.3)

Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

Although Patent Rule 131 refers to facts showing invention's completion in this country, Rule 131(b) makes distinction between actual reduction to practice, which has to be in this country, and application's filing.

3. Interference -- Reduction to practice -- Constructive reduction (§ 41.755)

35 USC 104, which prohibits reliance on activity in foreign country in establishing "date of

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"invention," has express exception as provided in Sections 119 and 365; Section 119 provides that when U.S. application is filed within year from application in convention country such as Netherlands, when all formalities have been complied with, U.S. application has same effect as same application would have if filed in this country on date on which application for patent for same invention was first filed in that foreign country.

4. Interference -- Reduction to practice -- Constructive reduction (§ 41.755)

Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

Section 119 is "patent-saving" provision for applicants' benefit, and applicant is entitled to rely on it as constructive reduction to practice to overcome reference's date under Patent Rule 131; entitlement to foreign filing date that can completely overcome reference can partially overcome reference by providing constructive reduction to practice element of proof required by Rule 131; it is statutory priority right that cannot be interfered with by construction placed on PTO rule.

5. Patentability -- Anticipation -- Publications -- In general (§ 51.2271)

Printed publication that is prior art under 35 USC 102(a) is also "prior art" under Section 103.

6. Interference -- In general (§ 41.01)

Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

Interferences involve policy questions not present when antedating a reference.

7. Affidavits -- Anticipating references (Rule 131) (§ 12.3)

Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

Patent Rule 131 requires proof of diligence coupling conception to application's filing.

8. Affidavits -- Anticipating references (Rule 131) (§ 12.3)

Patent Rule 131 cannot be liberally construed to point of eliminating all proof of diligence, no matter how short period to be covered.

9. Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

In re Stempel, 113 USPQ 77, had nothing to do with facts where issue is not what has been antedated but whether reference has been antedated at all.

10. Patentability -- Anticipation -- Carrying date back of references (§ 51.203)

What applicants must prove in order to have possession of invention is reduction to practice carried back to date prior to reference by connecting link of diligence, else they do not have kind of "possession" In re Clarke, 199 USPQ 665, and Patent Rule 131 require.

11. Construction of specification and claims -- "Means" claims (§ 22.60)

Claim drafted in "means plus function" format is construed to cover corresponding structure described in specification and its equivalents.

12. Court of Appeals for the Federal Circuit -- Weight given decision reviewed (§ 26.59)

Appellants to obtain reversal of rejection of appealed claims must clearly explain why Board of Appeals decision on appellants' arguments to board is wrong, not merely repeat those arguments hoping for different result.

Particular patents -- Integrated Circuit

Mulder and Wulms, Integrated Circuit, rejection of claims 2-4, 9, 31-33, 39-42, and 44 affirmed.

Case History and Disposition:

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Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Cornelius Mulder and Henricus Elisabeth Jozef Wulms, Serial No.

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602,473, filed Aug. 6, 1975. From decision rejecting claims, applicants appeal. Affirmed.

Attorneys:

Steven R. Biren, Tarrytown, N.Y., for appellant.

Thomas E. Lynch (Joseph F. Nakamura and Jere W. Sears, on the brief) for appellee.

Judge:

Before Markey, Chief Judge, and Rich and Bennett, Circuit Judges.

Opinion Text

Opinion By:

Rich, Circuit Judge.

This appeal is from the July 27, 1982, decision, adhered to on reconsideration October 19, 1982, of the U.S. Patent and Trademark Office (PTO) Board of Appeals (board) affirming the examiner's rejection under 35 USC 103 of certain claims¹ of appellants' application, serial No. 602,473, filed August 6, 1975, for "Integrated Circuit." Appellants claim the benefit under 35 USC 119 of a convention filing date in the Netherlands of October 9, 1974. We affirm.

Our jurisdiction of the appeal is under 28 USC 1295(a)(4)(A), (Pub. L. 97-164, Title 1, §127(a), Apr. 2, 1982, 96 Stat. 37).

Background

This ex parte appeal from the PTO involves appellants' patent application on an integrated circuit, the appealed claims of which stand rejected for obviousness under §103 in view of prior art disclosed in an article by Rodgers et al., published in the IEEE Journal of Solid State Circuits, Vol. SC-9, No. 5, pages 247 and 248 (Rodgers), combined with one or more of the following:

Table set at this point is not available. See table in hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.

The real party in interest here is the assignee of appellants, U.S. Philips Corporation, which is affiliated with N.V. Philips Gloeilampenfabrieken of the Netherlands, where the applicants are located. The U.S. patent application was prepared in the Netherlands and sent to the patent department of U.S. Philips Corporation in Briarcliff Manor, N.Y., where it was received on July 15, 1974. A corresponding Netherlands patent application was filed on October 9, 1974. The U.S. application was filed within a year under the International Convention on August 6, 1975, claiming the benefit of the Netherlands filing date under 35 USC 119. The PTO has accorded applicants that date. There is no question that applicants complied with all of the formalities required by §119 and related PTO rules.

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Confronted with rejections of claims based in part, if not primarily, on Rodgers, appellants attempted to antedate, and thus remove, that reference as prior art, by filing declarations under 37 CFR 1.131 (Rule 131). In pertinent part, the rule reads (emphasis ours):

§1.131 Affidavit or declaration of prior invention to overcome cited patent or publication.

(a) When any claim of an application is rejected on reference to a * * * printed

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publication, and the applicant shall make oath or declaration as to *facts showing a completion of the invention in this country* * * * before the date of the printed publication, then the * * * publication cited shall not bar the grant of a patent to the applicant, unless the date of such * * * printed publication be more than one year prior to the date on which the application was *filed in this country*.

(b) The showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference, or *conception of the invention prior to the effective date of the reference coupled with due diligence from said date to a subsequent reduction to practice or to the filing of the application*. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence satisfactorily explained.

Applicants proved to the satisfaction of the PTO the receipt in this country of the draft patent application which was accepted as a fact showing conception of the invention prior to Rodgers' publication date, which date is taken by the PTO to be the receipt of the IEEE Journal containing the Rodgers article by the PTO on October 7, 1974. Appellants make a half-hearted attempt to question the October 7 date by pointing out that the examiner did not receive his copy until October 10, but the copy relied on bears a PTO receipt stamp of October 7, amounting to an official record which appellants have not disproved.

The foregoing facts can be better visualized from the following chart, adapted from one in appellants' brief:

Tabular, graphic, or textual material set at this point is not available. Please consult hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.

Issues

The primary issue is the obviousness of the invention as defined in the appealed claims in view of the references relied on. Preliminary thereto is the question whether the Rodgers article has been overcome as a reference, and involved in that issue is the question whether appellants are entitled to their Netherlands filing date as a constructive reduction to practice. These questions will be considered in the reverse order of their statement.

Opinion

[1] Adverting to Rule 131, *supra*, as appellants have shown no actual reduction to practice of the invention in this country and no constructive reduction prior to the date of Rodgers, what Rule 131(b) says they have to show is conception in this country prior to Rodgers' date coupled with "due diligence from said date to * * * the filing of the application." The first question, therefore, is the date of conception in this country. The PTO (both the examiner and the board) have accepted July 15, 1974, the date of receipt in the U.S. of the draft application, as a conception date.

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The next question is whether appellants are entitled, as a date of constructive reduction to practice, to the Netherlands or only to the actual U.S. filing date. The examiner said it was the former, the board the latter. We agree with the examiner.

[2][3][4] The board cited no authority for depriving appellants of the benefit of their convention filing date; it only remarked that "the events of concern under 37 CFR 1.131 are events that occur in this country." It made no reference to §119 of the statute. We note that Rule 131 refers to "facts showing a completion of the invention in this country" but we also note that in (b) it makes a distinction between an *actual* reduction to practice (which has to be "in this country") and the "filing of the application." We are also aware of the statute which prohibits reliance on "activity * * * in a foreign country" in establishing "a date of invention," 35 USC 104. But that same statute has an express exception -- "except as provided in sections 119 and 365 of this title." It is §119 with which we are concerned. It provides that when a U.S. application has been filed, as was the application in this case, within a year from an application in a convention country such as the Netherlands, the formalities all being complied with, the U.S. application

* * * shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country * * *.

We hold that this provision entitles appellants to rely on their Netherlands filing date for a constructive reduction to practice. Section 119 is a "patent-saving" provision for the benefit of applicants, and an applicant is entitled to rely on it as a constructive reduction to practice to overcome the date of a reference under Rule 131. *In re Ziegler*, 52 CCPA 1473, 347 F.2d 642, 146 USPQ 76 (1965) (convention German filing dates available to overcome references under §119). If entitlement to a foreign filing date can completely overcome a reference we see no reason why it cannot partially overcome a reference by providing the constructive reduction to practice element of proof required by Rule 131. It is a *statutory* priority right which cannot be interfered with by a construction placed on a PTO rule. Cf. *In re Hilmer*, 53 CCPA 1288, 1312, 359 F.2d 859, 878, 149 USPQ 480, 496 (1966).

[5][6][7] This brings us to the next question under Rule 131. Referring to the time chart, supra, appellants have their conception date of July 15, 1974, and their constructive reduction to practice date of October 9, 1974, and Rule 131 requires that these dates must be "coupled with due diligence." Appellants would have us treat this case as though it were an interference between them and Rodgers, treating Rodgers as an applicant for a patent. But Rodgers is not an applicant and this is not an interference. Rodgers is a printed publication which is prior art under 35 USC 102(a), unless shown not to be prior, and thus also "prior art" under §103. Interference rules do not necessarily apply; nothing is to be gained by treating the situation as though it were something it is not. Interferences involve policy questions not present when antedating a reference. The argument is that *if* this were an interference, and *if* Rodgers were an applicant who has not reduced to practice at all, appellants were first to conceive and first to reduce to practice and would not have to prove diligence. This argument "won't fly." This is not an interference. Rule 131 requires proof of diligence coupling conception to the filing of the application.

[8] The next argument is that there is only a two-day period between the Rodgers' effective date and the filing date, that diligence need be shown only from *just prior* to Rodgers' date, that the gap is very short, and that Rule 131 should be "liberally construed." A liberal construction of the rule, which is clearly intended to benefit applicants, will permit applicants to show diligence from just prior to the date of the reference to their convention filing date, rather than all the way from their proven conception date, but liberality cannot be extended to the point of eliminating all proof of diligence, no matter how short the period to be covered. Appellants' difficulty, as they have had to admit, is that there is no evidence whatever of record showing diligence, and therefore they cannot comply with the rule. Focussing on the shortness of the gap is misleading. During the period between the time the draft application was received in this country and the time the application was filed in the U.S. PTO, the record shows no activity of any kind in this country. The only intervening event of record respecting this invention is the filing of the patent application in the Netherlands. Even that was not done until nearly 3 months after the draft U.S. application was dispatched. Under the circumstances, the PTO's refusal to accept the declarations as meeting the requirements of Rule 131 must be affirmed because of a total lack of evidence of diligence to couple conception to the filing date -- leaving a hiatus -- and Rodgers must be treated as prior art.

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[9] Appellants assert there is "CCPA authority" contrary to the board's interpretation of Rule 131 which, except for its refusal of the convention filing date for constructive reduction to practice, we approve. We see none. They have relied heavily on *In re Stempel*, 44 CCPA 820, 241 F.2d 755, 113 USPQ 77 (1957). Their reliance is misplaced. While the court there did construe Rule 131 "liberally," and in one respect contrary to its express terms to give Stempel his statutory rights, it was on a point having no bearing on the fact situation here and, more particularly, having nothing to do with the necessity for showing diligence. The essence of Stempel is that there the facts established by affidavits under Rule 131 did not show that Stempel

had completed the generic invention of the rejected claims although they did antedate "all pertinent subject matter" disclosed in the reference. The court held that sufficed, notwithstanding the words "completion of the invention" appearing in the rule. The case had nothing to do with facts such as those controlling here where the issue is not *what* has been antedated but *whether* the reference has been antedated at all.

[10] Another case appellants rely on is *In re Clarke*, 53 CCPA 954, 356 F.2d 987, 199 USPQ 665 (1966). Apparently, that is where they got the expression "possession" of the invention which they use to argue that they were in possession of "everything relevant to the invention disclosed by Rodgers" before the date of that reference. It could be that they were, in the conception sense, but that is not the issue. What they must prove in order to have possession is reduction to practice carried back to a date prior to Rodgers by the connecting link of diligence, else they do not have the kind of "possession" Clarke and Rule 131 require. The rejection in Clark was affirmed for, among other things, lack of a showing of diligence and we do not see how the case helps appellants, who are not using "possession" in the sense it was used in the Clarke opinion.

We have examined the other cases cited by appellants and find them of no more help to their contentions than those discussed above.

We turn now to the main issue of obviousness treating Rodgers as prior art.

The Obviousness Issue

a) The claimed invention

The invention of the appealed claims is a particular form of an Integrated Injection Logic (IIL or I 2L) circuit. I 2L circuits contain numerous logic gates each comprising a pair of transistors, one NPN type and one PNP type, one such gate being shown in schematic form within the broken line box 21 in a portion of appellants' Fig. 2:

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For each transistor, shown in conventional symbols, the emitter, base, and collector (three collectors in the case of the NPN transistor) have been labeled E, B, and C, respectively. In the arrangement shown, the NPN transistor (on the right) is called the "inverter" transistor, and the PNP transistor (on the upper left) is called the "complementary" transistor. The emitter 14 of the PNP transistor is called the "injector." Note that the collector of the PNP transistor is connected to the base of the NPN transistor, and the base of the PNP transistor is connected to the emitter of the NPN transistor.

A significant feature of this simple arrangement is that the two sets of electrically connected portions of the transistor pair can each share a common physical region of the doped semiconductor material in which they are formed. Thus, the arrangement lends itself to certain

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clever layouts or "topologies" of variously doped semiconductor material in the design of integrated circuits containing vast arrays of these gates. Appellants disclose an example of their topology in their Fig. 5:

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The PTO solicitor aptly described this figure in his brief:

The inverter NPN transistors are layed out in horizontal rows, whereas the conductive metal electrical interconnections are disclosed as vertical columns 86. Also, the emitters of the complementary PNP transistors are indicated by blocks 87, disclosed as vertical rails or columns on either side of the device, and the conductive metal electrical connections for the PNP transistor are labeled 88. The horizontal blocks 61-85 are the collectors for the PNP transistors, as well as the bases for the NPN transistors. * * * Finally, the unlabeled squares shown adjacent blocks 61-85 are the output collectors for the NPN transistors.

Appellants describe their invention thus:

A principle object of the invention is the provision of an I 2L circuit having a topology or layout which particularly lends itself to the use of computer-aided design, but where the usual loss of packing density previously associated with such techniques is minimized and where there is little sacrifice in the switching speed or delay time of the logic gate circuits.

The concept embodied in appellants' structure is to provide a column of complementary transistor emitter zones adjacent and parallel to an array of parallel-extending straight conductors or signal tracks. An array of inverter transistor gate circuits occupying different lengths are arranged in rows crossing the signal tracks and extending from a location in the vicinity of the complementary transistor emitter zones. The connections to the base regions and one or more collector regions in each inverter transistor gate circuit are made at the intersections of the straight signal tracks with the base and collector regions, regardless of the lateral spacing between the connections in a given row. That is why the lengths of the rows occupied by some of the gate circuits are different and why the spacing in the base and collector connections in a given row are different from those in another row.

Claim 39 is typical of the claims on appeal:

39. An integrated circuit comprising a common semiconductor body portion, said body portion comprising plural gate circuits each comprising at least one inverter

transistor having emitter and base zones and at least one collector, and a complementary transistor connected to the inverter transistor for biasing same and having emitter, base and collector zones with the complementary transistor having its collector zone connected to the inverter transistor base zone, and each gate circuit having means connecting the complementary transistor base zone and the inverter transistor emitter zone in a d.c. path, said inverter transistor being arranged along substantially parallel rows with all the inverter transistor collectors of the same gate circuit being located along the same row and wherein at least some of the gate circuits occupy different lengths in the row direction, means for interconnecting inverter transistor collectors and base zones of different gate circuits located in different rows to form desired logic, said inverter transistor collector and base zone interconnecting means comprising a group of elongated signal tracks substantially all of which extend substantially their entire length in mutually parallel straight lines and over the body substantially transversely to the row directions, said signal-track-interconnected collectors in different rows being located under the interconnecting signal track, at least plural tracks in the group of signal tracks interconnecting gate circuits in nonadjacent rows and crossing over at least one gate circuit in an intervening row, a plurality of said gate circuits each having connections to said signal tracks that are

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spaced apart in the row direction by distances that are different from the spacing of signal track connections to other gate circuits, the biasing complementary transistor emitter zones being located along a column extending parallel to and located alongside the said group of signal tracks, and means for isolating adjacent rows of inverter transistors.

b. The references

The primary reference is Rodgers, which discloses application of a "layout algorithm" to produce an I 2L circuit layout resembling that of appellants except that it has regular rows of doped semiconductor regions all of equal length. Rodgers contains no explanation of why these regions all have the same length.

The article by de Troye discusses some of the trade-offs involved in varying the physical arrangement of the N-type semiconductor with respect to the injector. Also disclosed is an I 2L circuit in which the base regions vary in size and shape, but in which the circuit components nevertheless form an ordered array.

Agraz-Guerena shows an I 2L circuit having an annular structure which contains heavily doped, low resistivity base regions.

Hart shows an I 2L memory circuit, and a conventional I 2L circuit including the use of electrically insulative material to isolate the separate base regions.

Berger shows the use of separate external PNP current sources in a complementary transistor

device which the examiner characterized as a forerunner to I 2L circuitry.

c. The rejections

There are four obviousness rejections, which will be discussed separately. Inasmuch as the solicitor in his brief incorporated by reference the position of the board, it is the board's position which will be set forth in connection with each rejection.

(1) Claims 9, 39-41, and 44 stand rejected as obvious from Rodgers' disclosure of an ordered array of I 2L elements having the same length considered together with de Troye's disclosure of an I 2L device having base regions of varying lengths. The board agreed with the examiner that one skilled in the art would have been motivated to increase the packing density of a Rodgers-type array by making the base regions only as long as necessary as taught by de Troye. Appellants had argued to the board that Rodgers had made all of his bases of equal length in order to achieve the desirable result of equalizing capacitances. However, the board found no basis for this argument in the Rodgers' article, and opined that, even if appellants were correct, equalized capacitance and high packing density were obvious trade-offs. Appellants also argued that the layout of their array lent itself particularly well to computer-aided design. The board rejected this argument as well, because the claims are not limited to computer-aided design, and because it felt that the elements in Rodgers' arrays are also arranged so as to be susceptible to computer-aided design. The board paid special attention to claim 9, which depends from claim 39 and recites additionally "means to reduce the input series resistance of the gate circuits." The board asserted that the arrangement disclosed in de Troye comprised such means.

On appeal, appellants adhere to their position that to make the gate circuits in Rodgers of varying lengths would be "contrary to the intent of Rodgers." This argument is not convincing. Appellants concede that Rodgers does not reveal why the gates are all the same length, so that there is manifestly no "intent" to which varying length can be contrary. Appellants also repeat their assertions about how their layout lends itself to computer-aided design. They say that de Troye's layout is not a matrix-ordered array, and so, presumably, not as well suited to computer-aided design. Rodgers, however, is manifestly a matrix-ordered layout, and appellants have not shown what differences between their invention and what is suggested by Rodgers and de Troye considered together would make their invention superior for computer-aided design.

[11] With respect to claim 9, we note that it is drafted in "means plus function" format, so that it is "construed to cover the corresponding structure * * * described in the specification and equivalents thereof." 35 USC 112. As stated above, the board said that de Troye's arrangement constituted means to reduce input series resistance. Appellants have neither asserted nor shown that de Troye's structure is not the equivalent of the structure disclosed in their specification for reducing input series resistance.

In view of the above, we affirm the decision of the board with respect to the above rejection of claims 9, 39-41, and 44.

(2) Claims 9 and 42 stand rejected for obviousness from Rodgers and de Troye as discussed,

together with Agraz-Guerena's disclosure of heavily doped, low resistivity base portions. Appellants argued to the board that it would not have been obvious to use the teachings of Agraz-Guerena in a matrix I 2L array because Agraz-Guerena teaches an annular structure. The board saw no reason

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why such a structure would not be suitable in a matrix array, and in addition noted that claims 9 and 42 are not limited to appellants' disclosed comb-type array. On appeal, appellants repeat their conclusory assertion that Agraz-Guerena's annular structure would have made application of its teachings to a comb-type structure nonobvious. In the absence of specifics or evidence as to why this is the case, we cannot say that the board erred in affirming the examiner's rejection. Hence, the board's decision with respect to this rejection is affirmed.

(3) Claims 2-4 stand rejected on Rodgers and de Troye together with Hart's disclosure showing the physical structure of a conventional I 2L circuit. Both before the board and this court appellants have not argued that claims 2-4 recite patentable subject matter independently of claim 39, from which they depend. Inasmuch as we have affirmed the board's decision with respect to claim 39, we affirm it with respect to claims 2-4 as well.

(4) Finally, claims 31-33 stand rejected on Rodgers, considered together with Hart's teaching of a conventional I 2L structure, and Berger's teaching of separate current sources. The board said that in view of these combined teachings, the use of an external conductor to couple the inverter base and current source collector would have been obvious. The board also stated that Hart suggests internally coupling transistor regions, and noted that claims 31-33 do not appear to distinguish over what appellants had illustrated as prior art in Fig. 1 of their application.

The board's affirmation of this rejection is the only decision on nonobviousness which appellants addressed in their request to the board for reconsideration. Therein they said that Berger does not show the electrical connection between the complementary transistor base zone and the inverter transistor emitter zone and at the same time an external connection between the complementary transistor collector zone and to the inverter transistor base zone as specified in claim 31. Appellants also contest the board's assertion that claims 31-33 read on what appellants labeled prior art in their specification. In denying the request for reconsideration, the board emphasized that the rejection had been premised on Berger *together with* Rodgers and Hart, not on Berger alone, and that Berger did indeed show those features for which it had been cited. The board also reaffirmed its belief that claims 31-33 read on conceded prior art.

On appeal, appellants now assert that Berger has "no relevance to appellants' gate array" and that the teachings of Rodgers and Hart cannot be combined with those of Berger to "render the present invention obvious." Appellants then proceed to assail the board's decision with exactly the same arguments which were unavailing before the board.

[12] We find these arguments unpersuasive. Appellants offer only unsupported conclusions which find no basis in any evidence of record. In short, we find appellants' mere repetition of

arguments fully answered by the board. To obtain reversal, appellants must clearly explain why the board decision on those arguments is wrong, not merely repeat arguments made to the board hoping for a different result. We therefore affirm the decision of the board with respect to claims 31-33.

The decision of the board affirming rejections of all appealed claims, 2-4, 9, 31-33, 39-42, and 44 is *affirmed*.

Affirmed.

Footnotes

Footnote 1. The claims on appeal to the board were 2-5, 7-9, 16-18, 20, 21, 23, 24, 31-33, 39-42, and 44. Claims 29, 30, and 45-47 had been allowed by the examiner. The board reversed the rejection of claims 5, 7, 8, 16-18, 20, 21, 23, 24, and 25. The claims on appeal to this court are 2-4, 9, 31-33, 39-42, and 44.

- End of Case -